

1   **WE CLAIM:**

- 2           1. A method for identifying a lost asset, the method comprising the steps of:
- 3               a) periodically transmitting a first predetermined identification signal  
4                   from a base station, the first predetermined identification signal unique  
5                   to the asset, each transmission of the first predetermined identification  
6                   signal separated by a first predetermined period of time;
- 7               b) receiving the first predetermined identification signal at an asset tag  
8                   attached to the asset, the asset tag having a predetermined  
9                   identification code unique to the asset;
- 10              c) comparing the first predetermined identification signal with the  
11                   predetermined identification code of the asset at the asset tag;
- 12              d) synchronizing the asset tag to the base station by transmitting a second  
13                   predetermined identification signal from the asset tag if the first  
14                   predetermined identification signal matches the predetermined  
15                   identification code of the asset, the second predetermined identification  
16                   signal containing the predetermined identification code of the asset;
- 17              e) generating a first alarm message at the asset tag indicating that the  
18                   asset is lost if the first predetermined identification signal does not  
19                   match the predetermined identification code of the asset or if the first  
20                   predetermined identification signal is not received after a first  
21                   predetermined period of time;
- 22              f) receiving the second predetermined identification signal at the base  
23                   station;

1                   g) comparing the second predetermined identification signal with the first  
2                   predetermined identification signal at the base station; and  
3                   h) generating a base alarm message at the base station indicating that the  
4                   asset is lost if the predetermined identification code of the asset  
5                   contained in the second predetermined identification signal does not  
6                   match the first predetermined identification signal or if the second  
7                   predetermined identification signal is not received after a second  
8                   predetermined period of time.

9                   2. The method as set forth in claim 1 further comprising the step of  
10                  generating a second alarm message at the asset tag after the first alarm message has  
11                  been generated, the second alarm message being generated when a playback button on  
12                  the asset tag is manually operated.

13                  3. The method as set forth in claim 1 wherein the first alarm message is a  
14                  first prerecorded audible voice message stating that the asset is lost.

15                  4. The method as set forth in claim 2 where the second alarm message is  
16                  a second prerecorded audible voice message containing further information regarding  
17                  the asset.

18                  5. A system for identifying a lost asset, comprising:

19                   a) means for transmitting a predetermined identification signal from a  
20                   base station, the first predetermined identification signal unique to the  
21                   asset;  
22                   b) means for receiving the first predetermined identification signal at a  
23                   asset tag attached to the asset, the asset tag having a predetermined  
24                   identification code unique to the asset;

- 1                   c) means for comparing the first predetermined identification signal with  
2                   the predetermined identification code of the asset;
- 3                   d) means for synchronizing the asset tag to the base station by  
4                   transmitting a second predetermined identification signal from the  
5                   asset tag if the first predetermined identification signal matches the  
6                   predetermined identification code of the asset, the second  
7                   predetermined identification signal containing the predetermined  
8                   identification code of the asset;
- 9                   e) means for generating a first alarm message at the asset tag indicating  
10                  that the asset is lost if the first predetermined identification signal does  
11                  not match the predetermined identification code of the asset or if the  
12                  first predetermined identification signal is not received after a first  
13                  predetermined period of time;
- 14                  f) means for receiving the second predetermined identification signal at  
15                  the base station;
- 16                  g) means for comparing the second predetermined identification signal  
17                  with the first predetermined identification signal at the base station;  
18                  and
- 19                  h) means for generating a base alarm message at the base station  
20                  indicating that the asset is lost if the predetermined identification code  
21                  of the asset contained in the second predetermined identification signal  
22                  does not match the first predetermined identification signal or if the  
23                  second predetermined identification signal is not received after a  
24                  second predetermined period of time.

1           6.     The system as set forth in claim 5 wherein the means for transmitting  
2     the first predetermined identification signal and the means for receiving the second  
3     predetermined identification signal are combined into a first radio frequency  
4     transceiver circuit operatively connected to a base station antenna, the first radio  
5     transceiver and first antenna located at the base station.

6           7.     The system as set forth in Claim 5 wherein the means for receiving the  
7     first predetermined identification signal and the means for transmitting the second  
8     predetermined identification signal are combined into a second radio frequency  
9     transceiver circuit operatively connected to an asset tag antenna, the second radio  
10    transceiver and asset tag antenna located at the asset tag.

11          8.     The system as set forth in claim 5 wherein the means for comparing  
12    the first predetermined identification signal with the predetermined identification code  
13    of the asset and the means for synchronizing the asset tag to base station are combined  
14    into a first logic controller operating a first software program, the first logic controller  
15    located at the asset tag.

16          9.     The system as set forth in claim 5 wherein the means for comparing  
17    the second predetermined identification signal with the first predetermined  
18    identification signal is a second logic controller operating a second software program,  
19    the second logic controller located at the base station.

20          10.    The system as set forth in claim 5 wherein the means for generating the  
21    first alarm message comprises further means for manually generating a second alarm  
22    message at the asset tag containing further information regarding the asset after the  
23    first alarm message has been generated.

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1           11. The system as set forth in claim 10 wherein the means for generating  
2 the first and second alarm messages comprise:

- 3           a) a first voice-recording circuit for recording the first and second alarm  
4           messages;
- 5           b) a first message storage memory system for storing the first and second  
6           alarm messages;
- 7           c) a first message playback circuit for playing the first and second alarm  
8           messages from the first message storage memory system;
- 9           d) a second alarm message control circuit for activating the first message  
10          playback circuit to play the second alarm message when the second  
11          alarm message control circuit is manually activated; and
- 12          e) an audio speaker operatively connected to the first message playback  
13          circuit for audibly reproducing the first and second alarm messages.

14           12. The system as set forth in claim 5 wherein the means for generating a  
15 base alarm message comprises an integrated circuit operatively connected to an audio  
16 amplifier operatively connected to an audio speaker, the electronic circuit adapted to  
17 produce an audible signal as the base alarm message.

18           13. The system as set forth in claim 5 wherein the means for generating the  
19 base alarm message comprises:

- 20           a) a second voice-recording circuit for recording the base alarm message;
- 21           b) a second message storage memory system for storing the base alarm  
22           message;
- 23           c) a second message playback circuit for playing the base alarm message  
24           from the second message storage memory system; and

1                   d) an audio speaker operatively connected to the second message  
2                   playback circuit for audibly reproducing the base alarm message.

3                  14. A system for identifying a lost asset, comprising:

- 4                  a) a base station having  
5                   i) means for assigning a predetermined identification code unique to  
6                   the asset,  
7                   ii) a first wireless radio frequency signal transceiver operatively  
8                   connected to a base station antenna,  
9                   iii) a first microprocessor operating a first software program  
10                   operatively connected to the first wireless radio frequency signal  
11                   transceiver and the means for assigning the predetermined  
12                   identification code unique to the asset,  
13                   iv) a base alarm message playback mechanism operatively connected  
14                   to the first microprocessor,  
15                   v) a power supply operatively connected to the first transceiver, the  
16                   first microprocessor and the base alarm message playback  
17                   mechanism, and  
18                   vi) a suitable enclosure for housing the elements of the base station  
19                   listed above

20                  whereby the base station is capable of transmitting a first  
21                  predetermined identification signal unique to the asset, receiving a  
22                  second predetermined identification signal containing a predetermined  
23                  identification code of an asset, comparing the first predetermined  
24                  identification signal with the predetermined identification code

- 1 contained in the second predetermined identification signal and  
2 generating a base alarm message if said predetermined identification  
3 code does not match the first predetermined identification signal or if  
4 the second predetermined identification signal is not received within a  
5 first predetermined period of time; and
- 6 b) an asset tag having
- 7 i) means for assigning a predetermined identification code unique to  
8 the asset tag,
- 9 ii) a second wireless radio frequency signal transceiver operatively  
10 connected to an asset tag antenna,
- 11 iii) a second microprocessor operating a second software program  
12 operatively connected to the second wireless radio frequency signal  
13 transceiver and the means for assigning the predetermined  
14 identification code of the asset tag,
- 15 iv) an asset tag alarm message recording and playback mechanism  
16 operatively connected to the second microprocessor, the alarm  
17 recording and playback mechanism adapted to record and playback  
18 a first alarm message,
- 19 v) a power supply operatively connected to the second transceiver, the  
20 second microprocessor and the alarm message recording and  
21 playback mechanism, and
- 22 vi) a suitable enclosure for housing the elements of the asset tag listed  
23 above and attaching to an asset

1                   whereby the asset tag is capable of receiving the first predetermined  
2                   identification signal, comparing the first predetermined identification  
3                   signal with the predetermined identification code of the asset tag,  
4                   synchronizing with the base station by transmitting the second  
5                   predetermined identification signal containing the predetermined  
6                   identification code of the asset tag if the first predetermined  
7                   identification signal matches the predetermined identification code of  
8                   the asset tag and generating the first alarm message if the first  
9                   predetermined identification signal does not match the predetermined  
10                  identification code of the asset tag or if the first predetermined  
11                  identification signal is not received within a second predetermined  
12                  period of time.

13                 15.   The system as set forth in claim 14 wherein the means for assigning a  
14                   predetermined identification code is programmed into the software program or is  
15                   manually set through user-selectable devices.

16                 16.   The system as set forth in claim 14 wherein the first and second  
17                   wireless radio frequency transceivers are adapted to communicate over a terrestrial  
18                   radio link or over a satellite radio link.

19                 17.   The system as set forth in claim 14 wherein the base alarm message  
20                   playback mechanism is an integrated circuit operatively connected to an audio  
21                   amplifier operatively connected to an audio speaker.

22                 18.   The system as set forth in claim 14 wherein the base station power  
23                   supply includes at least one direct current battery or an AC/DC power adapter.

1           19. The system as set forth in claim 14 wherein the asset tag alarm  
2 message recording and playback mechanism is an integrated circuit operatively  
3 connected to a memory storage system, the integrated circuit operatively connected to  
4 an audio amplifier operatively connected to an audio speaker.

5           20. The system as set forth in claim 19 wherein the asset tag alarm  
6 message recording and playback mechanism is operatively connected to a second  
7 alarm message control circuit, the asset tag alarm message recording and playback  
8 mechanism adapted to record a second alarm message, the asset tag alarm message  
9 recording and playback adapted to playback the second alarm message after the first  
10 alarm message has been generated and after the second message control circuit has  
11 been manually activated.

12          21. The system as set forth in claim 14 wherein the asset tag power supply  
13 includes at least one direct current battery.